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COMMITTEE ON THE PEACEFUL
USES OF OUTER SPACE

INFORMATION FURNISHED IN CONFORMITY WITH GENERAL ASSEMBLY RESOLUTION 1721 B (XVI) BY STATES LAUNCHING OBJECTS INTO ORBIT OR BEYOND

Note verbale dated 26 November 1996 from the Permanent Mission of Italy to the United Nations (Vienna) addressed to the Secretary-General

The Permanent Mission of Italy to the United Nations (Vienna) presents its compliments to the Secretary-General and has the honour to transmit, in accordance with resolution 1721 B (XVI), paragraph 1, of 20 December 1961, information concerning the Satellite per Astronomia (SAX), launched in April 1996, and ITALSAT F2, launched in August 1996 (see annex).

V.96-88101T

Annex

REGISTRATION DATA FOR ITALIAN SPACE LAUNCHES*

Name of satellite: **SAX (Satellite per Astronomia a raggi X)**

Date and place of launch: 30 April 1996, Cape Canaveral, Florida, United States of America

Basic orbital parameters:

Nodal Period:	96.3 minutes
Inclination:	3.95 degrees
Apogee:	603 kilometres
Perigee:	583 kilometres

Launch vehicle: Atlas G-Centaur

Launching State and organization: Italy - ASI (Italian Space Agency)
NASA (National Aeronautical and Space Administration of the United States of America)

General function: SAX is an Italian/Dutch celestial X-ray monitoring telescope which will have the capability of observing sources over more than three orders of energy - from 0.1 to 200 keV - with a relatively large area, a good energy resolution, associated with imaging capabilities (resolution of about 1 arc-minute) in the range of 0.1 to 10 keV. It carries a 64 MB tape recorder to unload data from earth orbit to Malindi, Kenya, via a geostationary INTELSAT spacecraft. This will allow a prompt operation and control of the satellite, particularly important in the cases of targets of opportunity (TOO) that need timely follow-up observations. During each orbit, up to 450 Mbits of data will be stored onboard and relayed to the ground during station passage. The average data rate available to instruments will be about 70 kbit/s, but peak rates up to 100 kbit/s can be achieved. SAX will provide significant and unique contributions in many X-ray astronomy areas by observing:

- Compact galactic sources
- Active galactic nuclei
- Clusters of galaxies
- Supernovae remnants
- Normal galaxies
- Stars

Characteristics of satellite:

Mass at launch:	1,400 kg
Height:	3 metres
Width (deployed):	9 metres
Stabilization:	3-axis
EIRP:	1 dbW
Operational lifetime:	2 years (nominal) 4 years (expected)

*The registration data are reproduced in the form in which they were received.

Name of satellite: **ITALSAT F2**

Date and place of launch: 8 August 1996, Guyana Space Center - Kourou, French Guyana

Basic orbital parameters: (for geostationary satellite)

Nodal Period:	1,439 minutes
Inclination:	± 0.1 degrees
Apogee height:	35,898 kilometres
Perigee height:	35,788 kilometres
Geographic longitude:	16.4 degrees East (nominal)
Longitude tolerance:	± 0.1 degrees

Launch vehicle: Ariane 44L - V90

Launching State and organization: Italy - ASI (Italian Space Agency/TELECOM ITALIA)
Arianespace

Satellite characteristics: ITALSAT second flight unit (F2) is a body-stabilized geostationary satellite that provides operational communications for domestic services in Ka-band and European services in Ku- and L-bands.

Mass at launch:	1,990 kg
Propulsion:	Bipropellant
Stabilization:	Three-axis
Operational lifetime:	Not less than 7.5 years

The satellite uses S-band for telemetry, command and tracking during its lifetime.

Uplink:	2,200 MHz and 2,290 MHz
Downlink:	2,025 MHz and 2,110 MHz

Payloads: The satellite has three communications payloads:

Multibeam payload: It consists of six operative transponders covering Italian territory with six partially overlapped spots. The payload uses the Ka-band.

Uplink:	27,6210 MHz and 29,473 MHz
Downlink:	18,820 MHz and 20,070 MHz

National payload and telemetry beacon: This consists of three operational transponders with domestic coverage. Both use the Ka-band.

Uplink:	29,517 MHz and 29,977 MHz
Downlink:	19,720 MHz and 20,180 MHz
Beacon:	18,685 MHz

European Mobile Service payload (EMS): The EMS payload provides coverage over western and eastern Europe, most of North Africa and the Middle East. It consists of two operative transponders, one for the forward link from fixed Earth stations (FES) to mobile terminals and the other for the return link from mobile terminals to FES. The feeder link between FES and the satellite is in Ku-band, while the link between mobile terminals and satellite is in L-band.

Uplink:	Ku: 14,236 MHz and 14,250 MHz
	L: 1,631.5 MHz and 1,660.5 MHz
Downlink:	Ku: 12,736 MHz and 12,750 MHz
	L: 1,530 MHz and 1,559 MHz